DATA SCIENCE, CAS

Contact

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Website

https://ischool.syr.edu/academics/certificate-of-advanced-study-in-data-science/

Overview

The Certificate of Advanced Study (CAS) in Data Science program requires 15-credit hours and prepares students to work with large amounts of data using information technologies as tools to gain knowledge and insight. The two required courses focus on handling data through its full lifecycle: architecting, acquiring, analyzing, and archiving data. The remaining elective credits enable specializations in data analytics, data storage and management or other areas such as data visualization.

All candidates should have a bachelor's degree or equivalent. In addition, it is recommended that potential students have a strong background in science, statistics, research, and/or information technology. Applicants should have an interest in interdisciplinary work focused on managing big data using information technologies as tools. Prospective students who have an interest in data science, but lack the recommended undergraduate background, are encouraged to inquire. Individual consultations are available for such prospective students to explore their potential candidacy. We also offer our CAS in Data Science online. Learn more about iSchool@Syracuse Online (https://onlinegrad.syracuse.edu/information-science/certificates-advanced-study/).

Student Learning Outcomes

After completing the program, students will be able to:

1. Collect, store, and access data by identifying and leveraging applicable technologies
2. Create actionable insight across a range of contexts (e.g. societal, business, political), using data and the full data science life cycle
3. Apply ethics in the development, use and evaluation of data and predictive models (e.g., fairness, bias, transparency, privacy)

Code	Title	Credits
Required Core		
IST 659	Data Administration Concepts and Database Management	3
IST 687	Introduction to Data Science	3
Electives		
Select three of the following:		9
IST 644	Managing Data Science Projects	
IST 652	Scripting for Data Analysis	
IST 664	Natural Language Processing	
IST 681	Metadata	
IST 686	Quantitative Reasoning for Data Science	
IST 691	Deep Learning in Practice	
IST 692	Responsible AI	
IST 707	Applied Machine Learning	
IST 718	Big Data Analytics	
IST 719	Information Visualization	
IST 722	Data Warehouse	
IST 736	Text Mining	
IST 737	Visual Analytic Dashboards	
IST 769	Advanced Big Data Management	
MBC 638	Data Analysis and Decision Making	
SCM 651	Business Analytics	
Total Credits		**15**